

ABSTRACT OF THE DISCLOSURE

A geolocation system for locating a cellular phone in a service area includes an auxiliary receive channel incorporated into the cellular phone. A plurality of transmitters are mutually dispersed at known locations to transmit low frequency beacon signals into the service area. Each beacon signal includes an identifying characteristic that can be used to identify the particular transmitter the signal emanated from. The low frequency of the signal prevents urban features within the service area from acting as signal waveguides and altering the path of the signal. When the user dials a predetermined number such as "911", the auxiliary receive channel is activated to receive the transmission signals and extract phase related information and the identifying characteristic from each signal. The extracted information is then transmitted to a base station using the cellular phone's normal communication link where the information is processed to determine the location of the cellular phone.